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July 24, 2013

Bob Stump Chairman; Gary Pierce; Brenda Burns; Bob Burns; Susan Bitter-Smith
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

In re: Docket # e-01933A-13-0224 TEP 2014 REST Plan Clarifications

In the matter of the application for approval of Tucson Electric Power's 2014 REST and DE Plans, I am writing to request that ACC Staff and Commissioners address the following questions and provide clarification and guidance.

The fundamental concerns include:

1. TEP's avoided cost (MCCCG) calculations for Renewable Energy resources may be significantly understated;
2. Commercial Scale DG Customers may be able to achieve a significant portion of the Utility Scale REST requirement at much less RES cost than the Utility resulting in significant reductions in the RES budget and savings to ratepayers;
3. Is it appropriate to provide RES payments to Shareholders for utility owned renewable energy facilities when the ACC has determined that none are justified for Commercial DG Customers that participate in funding of the RES/REST?

Q1: Are the Renewable Energy (RE) MCCCG's understated; Do TEP's MCCCG's accurately reflect <u>all</u> of the avoided costs provided by RE generation <u>for the expected life of those assets</u>? [Reference page 3 of Exhibit 2 MCCCG Renewable Technology 2014 Annual rates] Typically asset costs and benefits are calculated over the life of the assets and consider likely changes in other factors when calculating benefits.

- For example, TEP filed a Solar PV Resource MCCCG (avoided costs) as $48.08/MWH or 4.8c/kWh. Does that value include:
  - The PPFAC ($400M) and ECA ($350M) cost avoidance during the life of the PV assets?
  - The cost avoidance related to transmission (apprx. 10% of R-01 rate) and planned incremental transmission capacity that <u>local</u> PV generation provides, or could provide, during the life of the PV assets?
  - The cost avoidances related to transmission energy line loss (20%) and the incremental generation and depreciation of those assets (extended life), and the additional emissions and resulting ECA surcharges that are avoided, or could be avoided, by local PV generation during the life of the PV assets?
  - The avoided costs, demand and TOU charges, to generate electricity using much more expensive natural gas peakers? PV generation is coincident with a substantial part of the peak demand period.
  - The expected significant increases in coal and natural gas over the life of the PV assets? Coal and natural gas are global commodities; Japan and India are paying $18 to 23/ccft of natural gas. Facilities to liquefy and transport to those markets are being developed and China is now purchasing US coal. Global demand for these commodities will result in significant cost increases during the life of the RE assets. PV fuel costs nothing.

- The avoidance of imminent national carbon penalties during the life of the PV assets (Estimated at 3c/kwh)?
- The cost avoidance associated with the development of alternative water sources throughout the life of the PV assets? Although considered an "external" cost to electricity ratepayers, PV avoids the ¾ gallon of water lost to evaporation by fossil fueled conventional generation, about 7 Billion gallons per year of potable water at TEP sales rate. Per D. Modeer/CAP, the cost to develop alternative water sources is 10 to 50 times more costly than current sources. Those costs will be charged to water ratepayers, also the responsibility of the ACC.

Q2: Is the TEP 2015 incremental (2015 less 2014) RES budget request for new RE facilities calculated correctly and would it be less expensive, a much more productive use of Ratepayer funds, to have Commercial Scale customers generate some of the Utility scale REST requirement for 2014 and future?

In section D. MCCCG, page 10 of their Executive Summary, TEP states that they calculate their RE facility program expenses and amount of reimbursement from the RES budget by subtracting the RE Resources MCCCG from the PPA cost.

As TEP also recovers their aggregated cost of generation (4c/kwh?) in their base rates and surcharges it seems appropriate that the Program expense associated with RE generating facilities should also be reduced by the amount they recover from the generation portion of base rates/surcharges.

The following information regarding requested RES payments for TEP's current, CY2015, renewable energy facilities is derived from the information provided in TEP's filing.

	MWH [1]	$RES Budget [2]	$/kWh [3]
2 New 2015 RE Facilities 10% PV; 90% Wind	143,577	$9,743,297	**$0.068**

[1] Page 4, TEP Implementation Plan Components, table 1. Utility Scale Generation; 2 facilities
[2] Exhibit 1 TEP REST Line Item Budget/Utility Scale Energy =2015 less 2014 ($30,711,330 less $40,454, 628)
[3] $9,743,297/143,577,000 kWh = $0.06786 kWh

Commercial Scale Customers have demonstrated the capacity to establish large scale solar facilities and during 2014 can establish 20-year PPA (SSA) for PV facilities of MW or greater scale at about 9c/kWh and purchase outright at or less than $2.50/watt. Considering the much larger available scale, Utilities should be capable of bettering commercial customer pricing.
If the 2015 RES budget was calculated by subtracting the PV MCCCG of 4.8c/kwh from a PPA cost of 9c/kwh it would result in a RES reimbursement of 4.2c/kWh, 2.6c/kwh or 38% less than the 6.8c/kwh reflected by the TEP budget request.

And the cost of wind generation, which represents 90% of the 2015 incremental (new facilities, 2015 less 2014) budget request, is less than PV so the RES payments should be less than the example.

Without further clarification of the statistics it appears that the RES budget is excessive and the REST requirement can be achieved at much less cost to Ratepayers if established by DG Customers.

Commercial Customers and their Contractors now receive zero incentives to establish PV generating facilities and continue to demonstrate the capacity and willingness to establish large scale solar electric facilities.

- Reducing the 70% Utility and increasing the 15% Commercial Customer, and perhaps the 15% Residential, DG REST requirement and reinstatement of a 3c/kWh PBI for commercial scale customer established solar electric facilities would reduce the RES program costs by 56%
  - If the statistics provided are clarified and found justified the Customer incentives could be reduced

- Approval of Aggregated Net Metering docket 10-0202 as initially proposed would allow more commercial PV facilities to be established by local governments and school districts who are solely funded by taxpayers, the same persons as ratepayers, which would allow them to reallocate those expenses and avoid tax and fee increases impacting ratepayers, and would also assure and promote lower cost achievement of the REST.

Q3: Is it appropriate to provide RES fund payments to Shareholders for TEP Owned Solar facilities when none are provided to Commercial Ratepayer/Customers?

- TEP's Exhibit 1 indicates that they find solar generation to provide great benefit, as they desire to double the amount of shareholder owned RE generating assets, almost all Solar PV, increasing their RES payments for TEP Owned assets by $6.4M from $5.2M 2014 to $11.6M 2016, ostensibly to leverage and use the Federal ITC for further Shareholder benefit. It does not seem appropriate to provide those financial benefits to shareholders when they are denied to customer/Ratepayers.

Sincerely,

Mr. Terry Finefrock, CPIM
TEP Ratepayer

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